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State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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December 13, 1993

TO: File

THRU: Daron Haddock, Permit Supervisor

FROM: Sharon Falvey, Senior Reclamation Hydrologist

RE: N93-39-5-3#2 Abatement-Mine Site Sediment Pond Amendment Submitted on December 6, 1993, Utah Fuel Company, Skyline Mine, ACT/007/005-93I, Folder #2, Carbon County, Utah

SUMMARY

The operator was cited with violation N93-39-5-3#2 for failure to design the Mine Site Sedimentation Pond Emergency Spillway. A modification written on ~~November~~ 24, 1993 included designs for the Waste Rock Sedimentation Pond. On November 22, 1993 a technical memo indicated the operators November 15, 1993 submittal was adequate to abate the portion of N93-39-5-3 #2 regarding the Mine Site Emergency Spillway. Initial abatement measures for the portion relative to the Waste Rock Sedimentation Pond were included in the submittal received on November 26, 1993. A memo was FAXed to the operator on November 30, 1993 identifying items needing clarification. The focus of this memo is based on the response from the operator to the November 30, 1993 memo.

The operator provided calculations for both the 100 year-6 hour and 10 year-24 hour events. The operator changed design values for precipitation. The operator previously used 2.45 in. for the 10 year- 24 hour storm and now uses 2.43 inches. The current value used match the cited reference for the precipitation event. The operator provided a new map and cross sections for the pond. The provided map is obtained from an areal survey completed in 1992. This resulting pond volume curve has a large discrepancy from the value determined by the Division. The remainder of presented design elements were assumed to be correct.

It should be noted that discussions have occurred with the operator prior to their receipt of this memo. On December 7, 1993 the Engineer Carl Winters who, certified the designs was notified of the Pond Volume discrepancy. On December 8, 1993 in

a visit to the mine the I discussed this discrepancy with Gary Taylor who, indicated that the planimeter used was found to have an error but that the pond was still capable of retaining the design event. On December 10, this issue and the remainder of the deficiencies was discussed with Keith Zobell and Keith Welch. At that time, I indicated I would FAX this memo on Monday, December 13th.

Identified Deficiencies:

1. A short discussion indicating how the requirements for a total containment pond should be included. A certified statement that the pond design meets or exceeds the design precipitation event required for the pond is required for ponds without a spillway.

Response:

The operator included a discussion on provision for a total containment pond on page 3b/8 in Volume 5, Section 15. This page also includes a statement that the pond design exceeds the design requirements. The operator has included a certification page identifying that all the proposed design changes submitted are certified.

Remaining Deficiency:

None.

2. The operator should also provide certification of the design. This is most clearly demonstrated by submitting a cover page for the section submitted and including the date of revision which is being certified the certification stamp and signature. In addition the certified statement could be included on this page.

Response:

A certification page was included.

Remaining Deficiency:

None.

3. A demonstration that the pond must have a dewatering plan which provides adequate decant capabilities. According to the proposed rule preamble this means 90% of the water stored in the design precipitation event be removed within

the 10 day period following the event.

Response:

The operator presents the following method for dewatering:

1. Water meeting applicable discharge requirements will be pumped from the pond into the undisturbed drainage system.

2. Water not meeting applicable discharge requirements will be treated by draining through straw bales and or silt fences before entering the undisturbed drainage system.

3. All pumping will be done using current prudent engineering practice.

Analysis:

The operator does not provide for meeting applicable discharge requirements through this method. Although the operator indicates the drainage discharged to a stream will be drained through straw bales or silt fences this does not decidedly demonstrate that the water requirements shall be met. For example additional filtering does not change pH. The operator should provide a commitment for sampling applicable parameters prior to discharge, and provide a commitment to treat water when necessary to meet water quality requirements. Additionally, the operator at this time does not have a water quality permit for this site. Therefore, approval of the decant should not be approved at this time.

As has been requested of other operators the pumping plan should include the following:

1. Pump system and power supply description.
2. Dewatering rate calculation demonstrating the pumping rate to used to de-water the 10 yr.-24 hr. runoff volume.
3. Provide a drawing for a floating decant intake w/a provided on for an oil skimmer.
4. Provide a discussion and means to ensure the decanting operation will cease 1.0 ft above the maximum sediment elevation.
5. Provide a discussion and means to retain all storm water for a minimum of 24 hours and until effluent limitations are met.

Remaining Deficiency:

3a. Provide a description of the following to indicate prudent decant measures are met:

1. Pump system and power supply description.
2. Dewatering rate calculation demonstrating the pumping rate to used to de-water the 10 yr.-24 hr. runoff volume.
3. Provide a drawing for a floating decant intake w/a provided on for an oil skimmer.
4. Provide a discussion and means to ensure the decanting operation will cease 1.0 ft above the maximum sediment elevation.
5. Provide a discussion and means to retain all storm water for a minimum of 24 hours and until effluent limitations are met.

3b. Provide proof of notification to the Department of Environmental Quality that this pond is a discharging pond. Should the operator receive an event where discharge is necessary the operator will be in violation of the regulations unless the UPDES discharge point is approved by that time.

New Deficiency:

Proposal :

The operator did resubmit the pond drawing and cross sections with a new pond volume curve.

Analysis:

In the previous review it was assumed all inputs other than precipitation were the same. The operator did not meet the regulatory design requirements of the 10 year - 24 hour event therefore, the design was not checked further. During this review the pond volume curve was noted to be changed. The submitted values were checked and, it was determined that the pond volume presented is significantly greater (greater than 10%) than the Divisions value. In light of this new development the operator must identify review the presented input parameters.

Deficiency:

4. Provide a demonstration that the design volume for the sediment pond is met.

RECOMMENDATION

It is recommended the Division deny this submittal due to the lack of complete and accurate information. The operator should meet the requested decant procedure details and, provide verification of the UPDES permit requirements. The issue regarding the verification of sediment pond volume also must be addressed.

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